

U.S. Patent Application Serial No. 09/376,308
Reply to OA of April 11, 2005

IN THE SPECIFICATION:

A clean copy of the Substitute Specification is attached hereto.

OK TO DRAFT
SUB SPEC 4/18/05
PCT.

INTEGRATED CIRCUIT FOR PROTOCOL CONTROL

BACKGROUND OF THE INVENTION

1) Field of the Invention

The present invention relates to a protocol control integrated circuit to be incorporated into a system which makes data-interchange communications with portable type medium, and more particularly to a protocol control integrated circuit for use in a variety of transaction apparatuses capable of handling digital money (electronic money, E-money) and credit transactions, such as ATMs (Automatic Teller Machines), ECRs (Electric Cash Registers), digital money load terminals, electronic purses, POS terminals/hand-held POS terminals (handy POSs)/POS servers constituting POS (Point Of Sales) systems, with this integrated circuit functioning as an interface device intervening between the aforesaid variety of transaction systems and portable mediums containing digital money [for example, IC (Integrated Circuit) cards].

In recent years, from the standpoint of the safety of settlement, convenience and others, interest has been shown toward so-called digital money which utilizes electronic digital data as cash and yet which serves as a settlement means replacing such currency as paper money and coinage, and it has been put to practical use in various approaches different in an issuing mode, circulation mode or settlement mode. A different approach requires a different protocol dealing with the digital money.

For this reason, systems, dealing with digital money, have needed the emergence of a standard component which enables easy processing of a plurality of types of digital money different in protocol from each other.